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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/399,412 09/20/99 RING

M CRD-99304

EXAMINER

PM92/0410

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BROADHEAD, B

ART UNIT

PAPER NUMBER

3661

DATE MAILED:

04/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/399,412

Applicant(s)

RING, MICHAEL E.

Examiner

Brian J. Broadhead

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 3, 5, 6, 7, 8, 11, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Cook et al., 5605387.

As per claims 1 and 11, Cook et al. discloses preprogramming information into a computer on line 47, on column 2; determining the speed of the train on line 43, on column 2; communicating a speed signal to a computer on the locomotive on line 8, on column 4; determining in the computer a pressure that can be applied to the brake cylinders that will maintain maximum adhesion between the wheels and the rail surface on lines 40-47, on column 4; communicating the pressure signal to the brake cylinders on lines 65-67, on column 4; and maintaining maximum pressure on the brake cylinders to stop the train in the shortest distance on lines 1-3, on column 5.

As per claim 2, Cook et al. discloses providing feedback to the computer on line 15, on column 2.

As per claim 3, Cook et al. does individually control each truck (axle) of the train so it is inherent that the invention knows how many trucks there are. This is equivalent to knowing the length for determining how to distribute braking power.

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As per claims 5 and 6, Cook et al. discloses programming the weight and weight of each car and using it to calculate brake pressure for the shortest stop distance on lines 40-52, on column 4.

As per claims 7 and 8, Cook et al. discloses the speed and pressure signals are electrical signals on lines 63-65, on column 3, and lines 65-67, on column 4.

As per claims 16 and 17, Cook et al. discloses speed sensing means on the locomotive and freight cars on lines 60-61, on column 3.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al., 5605387, in view of Jordan, Jr., 5424948.

5. Cook et al. discloses all the limitations as set forth above. Cook et al. does not disclose using the coefficient of friction to maintain maximum brake pressure. Jordan, Jr. teaches of using coefficient of friction to maintain maximum brake pressure in figure 1. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the varying coefficient of friction of Jordan, Jr. in the invention of Cook et al. because such modification would compensate for different coefficient of frictions present under different environmental conditions.

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6. Claims 9, 10, 12, 13, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al., 5605387, in view of Kull, 5681015.

7. Cook et al. discloses all the limitations as set forth above. Cook et al. does not explicitly disclose transmitting the control signals over wires or by radio communication. Kull teaches of using both wire and radio communication on lines 19-22, on column 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the wires or radio communication of Kull in the invention of Cook et al. because it prevents the delay associated with pneumatic signals.

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al., 5605387, in view of Matsuoka, 5544057.

Cook et al. discloses all the limitations as set forth above. Cook et al. does not disclose means for determining the weight of the train. Matsuoka teaches of determining the weight of train in the abstract. It would have been obvious to use the weight detection of Matsuoka in the invention of Cook et al because such modification would provide the load present that will cause braking torque's to vary.

9. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al. 5605387, in view of Roselli et al., 5718487.

Cook et al. discloses all the limitations as set forth above. Cook et al. does not disclose input means in the locomotive and the input means being a keyboard. Roselli et al. discloses input means in the locomotive and the input means being a keyboard on lines 33-35, on column 4. It would have been obvious to one of ordinary skill in the art

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at the time the invention was made to use the keyboard of Roselli et al. in the invention of Cook et al to provide a way to adjust variable related to train operation.

Response to Arguments

10. Applicant's arguments filed 1-29-01 have been fully considered but they are not persuasive. The argument that Cook et al. would not be used with a freight car consist because it is used on a mag-lev train does not hold any weight with the examiner. Cook et al. discloses a braking system that balances the brake forces on the wheel when the train is braking and is no longer levitating. From the Cook et al. disclosure the examiner find it hard to believe that it would not be used on a freight train consist, especially considering that Cook et al. discusses fully loaded, half loaded, and empty cars. As per the argument that Cook et al. discloses nothing about maintaining maximum adhesion, on lines 30-35, on column 4, Cook et al. discloses a locked wheel signal and a hydroplaning protection signal; and on line 57, on column 4, anti-skid torque signals. The whole point behind anti-skid systems is to maintain maximum adhesion between the wheel and the surface the wheel is travelling on.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Broadhead whose telephone number is 703-308-9033. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A. Cuchlinski can be reached on 703-308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

BJB
April 3, 2001

Jacques Louis Jacques
JACQUES H. LOUIS JACQUES
PRIMARY EXAMINER